

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
30 June 2005 (30.06.2005)

PCT

(10) International Publication Number  
**WO 2005/058348 A1**

(51) International Patent Classification<sup>7</sup>: **A61K 38/55**,  
31/536, A61P 37/06

(21) International Application Number:  
PCT/US2004/041580

(22) International Filing Date:  
10 December 2004 (10.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/528,846 11 December 2003 (11.12.2003) US  
60/532,202 23 December 2003 (23.12.2003) US

(71) Applicant (for all designated States except US): **AXYS  
PHARMACEUTICALS, INC.** [US/US]; 180 Kimball  
Way, So. San Francisco, CA 94080 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **ELROD, Kyle C.**  
[US/US]; 3225 Upper Lock Avenue, Belmont, California  
94002 (US).

(74) Agents: **BANSAL, Rekha et al.**; CELERA, an Applera  
Business Corporation, 180 Kimball Way, So. San Fran-  
cisco, CA 94080 (US).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,  
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,  
GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

- with international search report
- before the expiration of the time limit for amending the  
claims and to be republished in the event of receipt of  
amendments

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: USE OF CATHEPSIN S INHIBITORS FOR TREATING AN IMMUNE RESPONSE CAUSED BY ADMINISTRA-  
TION OF A SMALL MOLECULE THERAPEUTIC OR BIOLOGIC

(57) Abstract: The present invention is directed to the use of Cathepsin S inhibitors in combination with a therapy that causes a  
deleterious immune response in patients receiving the therapy.

WO 2005/058348 A1